

IN THE CLAIMS:

Please amend the claims being submitted herewith as follows:

1. (Currently Amended) An on-board power system for a motor vehicle with a large number of consumers and at least one central electronic system housed in a box (3,4), wherein the consumers are connected with this at least one central electronic system, and with a body bulkhead [(1)] between the engine compartment and the passenger cabin, characterized in that

the at least one central electronic system housed in the box (3,3') is located at least close to the body bulkhead (1,1') on the passenger cabin side, and that at least one sealed splitter (passthrough) [(1a)] is provided for the connecting cables running from the connectors on the box [(3)] for the central electronic system to the consumers in the engine compartment.
2. (Currently Amended) The on-board power system according to claim 1, characterized in that

the at least one box [(3)] is mounted flush and directly on the body bulkhead [(1)], and that the at least one splitter (passthrough) [(1a)] faces a side of the box [(3)] that is furnished with connectors, and that the connecting cables for the engine compartment are connected to these connectors.
3. (Currently Amended) The on-board power system according to claim 1, characterized in that

at least one sealed splitter (passthrough) [(1a)] that is furnished with connectors on both sides is located in the body bulkhead [(1)], the connectors on the one side of the splitter connecting the cables to the consumers, and on the other side connecting short connecting cables to the connectors on box [(3)].
4. (Currently Amended) The on-board power system according to ~~any of claims 1 to 3~~ claim 1, characterized in that

two boxes for the two sides of the vehicle are arranged on the bulkhead [(1)].
5. (Currently Amended) The on-board power system according to ~~any of claims 1 to 4~~

claim 1, characterized in that

at least one further box ~~[(4)]~~, preferably two boxes ~~(41, 42)~~ for the two sides of the vehicle, are arranged in the rear space, particularly on the rear bulkhead ~~[(2)]~~.

6. (Currently Amended) The on-board power system according to ~~any of claims 1 to 5~~ claim 1, characterized in that

as well as the central electronic system, switching means for the fuse and distribution function (SP boxes) are also integrated in the box ~~[(3)]~~/boxes ~~(3, 4)~~, and preferably protect all low and high current circuits to the adjacent consumers in the SP box.

7. (Currently Amended) The on-board power system according to claim 6, characterized in that

the signal and power circuits originate from the SP box ~~[(3)]~~/SP boxes ~~(3, 4)~~.

8. (Currently Amended) The on-board power system according to ~~either of claims 5 or 6~~ claim 5, characterized in that

the outputs from the connecting cables are protected by switches (Mosfets and/or relays) ~~(26, 27)~~ and/or reversible fuses (polyswitches) ~~[(36)]~~.

9. (Currently Amended) The on-board power system according to ~~any of claims 6 to 8~~ claim 6, characterized in that

the individual SP boxes ~~(3, 4)~~ serve all the functions of the neighboring space.

10. (Currently Amended) The on-board power system according to ~~any of claims 1 to 9~~ claim 1, characterized in that

the connectors on box ~~[(3)]~~/boxes ~~(3, 4)~~ are constructed as plugs ~~(5, 6)~~ and/or as direct contacts ~~[(12)]~~.

11. (Currently Amended) The on-board power system according to claim 10, characterized in that

one side of each of the boxes ~~(3, 4)~~ is furnished with plugs ~~(5, 6)~~, and the other side is furnished with direct contacts ~~[(12)]~~.

12. (Currently Amended) The on-board power system according to ~~any of claims 1 to 11~~ claim 1, characterized in that
each of the boxes ~~(3, 4)~~ is connected to the respectively adjacent consumers and sensors.
13. (Currently Amended) The on-board power system according to ~~any of claims 6 to 12~~ claim 6, characterized in that
an energy storage device is connected to at least one of the SP boxes ~~[(3)]~~.
14. (Currently Amended) The on-board power system according to claim 13, characterized in that
the energy storage device and the associated SP box ~~[(3)]~~ that are used to start the engine are situated close to the engine, and that the generator ~~[(G)]~~ is connected to this energy storage device.
15. (Currently Amended) The on-board power system according to ~~claims 13 or 14~~ claim 13, characterized in that
this SP box ~~[(3)]~~ assigned to the energy storage device supplies current to the other SP boxes ~~[(4)]~~.
16. (Currently Amended) The on-board power system according to ~~any of claims 5 to 15~~ claim 5, characterized in that
the front SP box(es) ~~[(13)]~~ distribute the current for the rear space (inside and trunk) and provide electrical protection therefor.
17. (Currently Amended) The on-board power system according to ~~any of claims 6 to 16~~ claim 6, characterized in that
a second battery (backup battery) is housed in the rear section of the vehicle and is connected to the SP box that is located there.
18. (Currently Amended) The on-board power system according to ~~any of claims 6 to 17~~ claim 6, characterized in that

one SP box assumes the master function in the software structure and the other SP boxes assume slave functions (i.e. they only receive signals and actuate consumers).

19. (Original) The on-board power system according to claim 18, characterized in that the slave boxes include an emergency program for minimum processing in the event that the master SP box fails.